## Connecting via Winsock to STN

Welcome to STN International! Enter x:X

LOGINID: SSPTAJMN1626

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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* * * * * * * * * * Welcome to STN International
                                                    * * * * * * * * * *
NEWS
                 Web Page for STN Seminar Schedule - N. America
                 STN AnaVist, Version 1, to be discontinued
NEWS
         APR 04
NEWS 3
         APR 15
                 WPIDS, WPINDEX, and WPIX enhanced with new
                 predefined hit display formats
     4 APR 28
                 EMBASE Controlled Term thesaurus enhanced
NEWS
NEWS
      5
         APR 28
                 IMSRESEARCH reloaded with enhancements
NEWS 6 MAY 30
                 INPAFAMDB now available on STN for patent family
                 searching
NEWS 7 MAY 30
                 DGENE, PCTGEN, and USGENE enhanced with new homology
                 sequence search option
NEWS 8 JUN 06
                 EPFULL enhanced with 260,000 English abstracts
         JUN 06
NEWS
     9
                 KOREAPAT updated with 41,000 documents
NEWS 10
         JUN 13
                 USPATFULL and USPAT2 updated with 11-character
                 patent numbers for U.S. applications
         JUN 19
                 CAS REGISTRY includes selected substances from
NEWS 11
                 web-based collections
NEWS 12
         JUN 25
                 CA/CAplus and USPAT databases updated with IPC
                 reclassification data
NEWS 13
         JUN 30 AEROSPACE enhanced with more than 1 million U.S.
                 patent records
NEWS 14
         JUN 30
                 EMBASE, EMBAL, and LEMBASE updated with additional
                 options to display authors and affiliated
                 organizations
NEWS 15
         JUN 30
                 STN on the Web enhanced with new STN AnaVist
                 Assistant and BLAST plug-in
NEWS 16
         JUN 30 STN AnaVist enhanced with database content from EPFULL
NEWS 17
         JUL 28 CA/CAplus patent coverage enhanced
NEWS 18 JUL 28 EPFULL enhanced with additional legal status
                 information from the epoline Register
NEWS 19
         JUL 28 IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS 20
         JUL 28 STN Viewer performance improved
NEWS 21
         AUG 01
                 INPADOCDB and INPAFAMDB coverage enhanced
NEWS 22 AUG 13 CA/CAplus enhanced with printed Chemical Abstracts
                 page images from 1967-1998
NEWS 23
         AUG 15
                 CAOLD to be discontinued on December 31, 2008
NEWS 24
         AUG 15
                 CAplus currency for Korean patents enhanced
NEWS 25
         AUG 25
                 CA/CAplus, CASREACT, and IFI and USPAT databases
                 enhanced for more flexible patent number searching
NEWS 26 AUG 27
                 CAS definition of basic patents expanded to ensure
                 comprehensive access to substance and sequence
                 information
```

NEWS 27 SEP 18 Support for STN Express, Versions 6.01 and earlier, to be discontinued

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS LOGIN Welcome Banner and News Items

NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 14:15:55 ON 19 SEP 2008

=> FIL REG
COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION
0.21 0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 14:16:06 ON 19 SEP 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the  ${\tt ZIC/VINITI}$  data file provided by InfoChem.

STRUCTURE FILE UPDATES: 17 SEP 2008 HIGHEST RN 1049989-16-3 DICTIONARY FILE UPDATES: 17 SEP 2008 HIGHEST RN 1049989-16-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting  ${\tt SmartSELECT}$  searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>

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```
chain nodes :
1  2  3  4  5  6  7  8  14  18
ring nodes :
9  10  11  12  13
chain bonds :
1-2  2-3  2-5  3-4  3-6  7-8  13-14
ring bonds :
9-10  9-13  10-11  11-12  12-13
exact/norm bonds :
2-5  3-4  3-6  7-8  9-10  9-13  10-11  11-12  12-13  13-14
exact bonds :
1-2  2-3
```

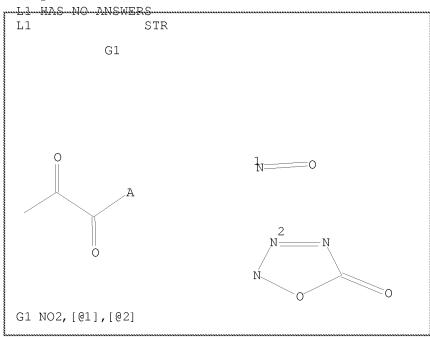
G1:NO2, [\*1], [\*2]

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 18:CLASS

## L1 STRUCTURE UPLOADED

=> D



Structure attributes must be viewed using STN Express query preparation.

=> S L1

SAMPLE SEARCH INITIATED 14:16:24 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 5619 TO ITERATE

35.6% PROCESSED 2000 ITERATIONS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 107885 TO 116875 PROJECTED ANSWERS: 1182 TO 2300

L2 31 SEA SSS SAM L1

=> D SCAN

31 ANSWERS

31 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN 4-Pyridinepropanoic acid, 2-methyl-5-nitro- $\alpha$ -oxo-, ethyl ester C11 H12 N2 O5

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

31 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN Glycinamide, N=[[5-(4-chloropheny1)-2-furany1]carbony1]-L-isoleucy1-3-cyclohexy1-L-alany1-(3S)-3-amino-2-oxopentanoy1-N-[(3-nitropheny1)sulfony1]- (9CI)

C39 H47 Cl N6 O11 S

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-B

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 31 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN IN L-Proline, N-[(1,1-dimethylethoxy)carbonyl]-L- $\alpha$ -aspartyl-N-[4-

Absolute stereochemistry.

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

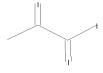
31 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN Pyruvic acid, [4-(benzylthio)-2-nitrophenyl]- (7CI) C16 H13 N O5 S

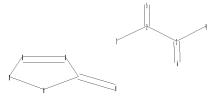
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

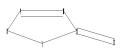
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=>

Uploading C:\Program Files\STNEXP\Queries\10581340\2.str







chain nodes :
1 2 3 4 5 6 12
ring nodes :

7 8 9 10 11 chain bonds:

1-2 2-3 2-5 3-4 3-6 11-12

ring bonds :

7-8 7-11 8-9 9-10 10-11

exact/norm bonds :

2-5 3-4 3-6 7-8 7-11 8-9 9-10 10-11 11-12

exact bonds: 1-2 2-3

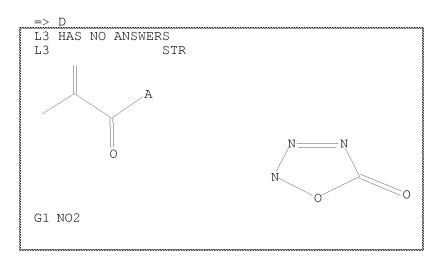
G1:NO2

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:Atom 8:Atom 9:Atom

10:Atom 11:Atom 12:CLASS

## L3 STRUCTURE UPLOADED



Structure attributes must be viewed using STN Express query preparation.

=> S L3

SAMPLE SEARCH INITIATED 14:17:34 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 0 TO 0 PROJECTED ANSWERS: 0 TO 0

L4 0 SEA SSS SAM L3

=> S L3 FULL

FULL SEARCH INITIATED 14:17:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2 TO ITERATE

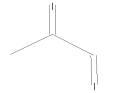
100.0% PROCESSED 2 ITERATIONS 0 ANSWERS

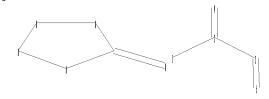
SEARCH TIME: 00.00.01

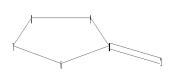
L5 0 SEA SSS FUL L3

=>

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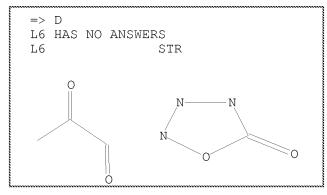
chain nodes :
1 2 3 4 5 11
ring nodes :
6 7 8 9 10
chain bonds :
1-2 2-3 2-4 3-5 10-11
ring bonds :
6-7 6-10 7-8 8-9 9-10
exact/norm bonds :
2-4 3-5 6-7 6-10 7-8 8-9 9-10 10-11
exact bonds :
1-2 2-3

G1:NO2

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:CLASS

## L6 STRUCTURE UPLOADED



G1 NO2

Structure attributes must be viewed using STN Express query preparation.

=> S L6

SAMPLE SEARCH INITIATED 14:18:39 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 0 TO 0 PROJECTED ANSWERS: 0 TO 0

L7 0 SEA SSS SAM L6

=> S L6 FULL

FULL SEARCH INITIATED 14:18:43 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2 TO ITERATE

100.0% PROCESSED 2 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

L8 0 SEA SSS FUL L6

->

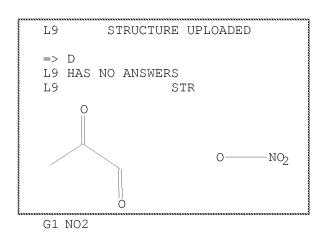
Uploading C:\Program Files\STNEXP\Queries\10581340\4.str



chain nodes :
1 2 3 4 5 7 8
chain bonds :
1-2 2-3 2-4 3-5 7-8
exact/norm bonds :
2-4 3-5 7-8
exact bonds :
1-2 2-3

G1:NO2

Match level:
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 7:CLASS 8:CLASS



Structure attributes must be viewed using STN Express query preparation.

=> S L9
SAMPLE SEARCH INITIATED 14:22:10 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 217 TO ITERATE

100.0% PROCESSED 217 ITERATIONS 4 ANSWERS SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 3457 TO 5223
PROJECTED ANSWERS: 4 TO 200

4 SEA SSS SAM L9 L10

=> D SCAN

L10 4 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Propanoic acid, 2-oxo-, 2-(nitrooxy)-1-[(nitrooxy)methyl]ethyl ester
MF C6 H8 N2 O9

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L10 4 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN

IN Propanoic acid, 2-oxo-, 2-nitro-3-(nitrooxy)-2-[(nitrooxy)methyl]propyl ester

MF C7 H9 N3 011

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> S L9 FULL

FULL SEARCH INITIATED 14:22:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 4141 TO ITERATE

100.0% PROCESSED 4141 ITERATIONS 122 ANSWERS

SEARCH TIME: 00.00.01

L11 122 SEA SSS FUL L9

=> FIL CAPLUS

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 538.76 538.97

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 14:22:35 ON 19 SEP 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 19 Sep 2008 VOL 149 ISS 13 FILE LAST UPDATED: 18 Sep 2008 (20080918/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/legal/infopolicy.html

=> S L11

L12 9 L11

=> D IBIB 1

L12 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2008 ACS ON STN
ACCESSION NUMBER: 2008:339268 CAPLUS
DOCUMENT NUMBER: 148:449109
TITLE: Thermal stability of carbonyl radicals. Part II.
Reactions of methylglyoxyl and methylglyoxylperoxy radicals at 1 bar in the temperature range 275-311 K
Jagiella, Stefan; Zabel, Friedhelm
Institut fuer Physikalische Chemie, Universitaet
Stuttgart, Stuttgart, D-70569, Germany
Physical Chemistry Chemical Physics (2008), 10(13), 1799-1808
CODEN: PPCPPG; ISSN: 1463-9076
ROYAL SOCIETY JOURNAL TYPE:
LANGUAGE: ROYAL SOCIETY OF CHEMISTRY
JOURNAL TYPE: JOURN

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:588522 CAPLUS
DOCUMENT NUMBER: 143:120530
Nitric oxide-releasing pyruvate compounds,
compositions and methods for treating cardiovascular and other diseases
INVENTOR(S): Garvey, David S.; Fang, Xinqin; Subhash, Khanapure
P.;

	compositions an and other disea	d methods for treatir .ses	ng cardiovascular							
INVENTOR(S): P.;	Garvey, David S	.; Fang, Xinqin; Subl	nash, Khanapure							
PATENT ASSIGNEE(S): SOURCE:	Ramani, Ranatunga R.; Shiow-Jyi, Wey Nitromed, Inc., USA PCT Int. Appl., 82 pp. CODEN: FIXXD2									
DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:	Patent English									
		APPLICATION NO.								
		WO 2004-US41069	20041210							
WO 2005060603										
		BA, BB, BG, BR, BW, DM, DZ, EC, EE, EG,								
		IN, IS, JP, KE, KG,								
		MD, MG, MK, MN, MW,								
		RO, RU, SC, SD, SE,								
		UG, US, UZ, VC, VN,								
		NA, SD, SL, SZ, TZ,								
AZ, BY, KG,	KZ, MD, RU, TJ,	TM, AT, BE, BG, CH,	CY, CZ, DE, DK,							
EE, ES, FI,	FR, GB, GR, HU,	IE, IS, IT, LT, LU,	MC, NL, PL, PT,							
		CF, CG, CI, CM, GA,	GN, GQ, GW, ML,							
MR, NE, SN,										
		AU 2004-305016								
CA 2549412	A1 20050707 A2 20060823	CA 2004-2549412 EP 2004-813393	20041210							
		GB, GR, IT, LI, LU,								
		BG, CZ, EE, HU, PL,								
PRIORITY APPLN. INFO.:	11, RO, C1, 1R,	US 2003-528184P								
		WO 2004-US41069	W 20041210							

MARPAT 143:120530 OTHER SOURCE(S):

L12 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:432749 CAPLUS
DOCUMENT NUMBER: 143:178225
TITLE: Atmospheric Chemistry of C3-C6
Cycloalkanecarbaldehydes
O'Anna, Barbara; Wisthaler, Armin; Andreasen,
Ceyvind; AUTHOR(S): Oeyvind;

CORPORATE SOURCE:

SOURCE:

Hansel, Armin; Hjorth, Jens; Jensen, Niels R.; Nielsen, Claus J.; Stenstrom, Yngve; Viidanoja, Jyrki Department of Chemistry, University of Oslo, Oslo, N-0315, Norway Journal of Physical Chemistry A (2005), 109 (23), 5104-5118 CODEN: JPCAFH; ISSN: 1089-5639 American Chemical Society Journal English 78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
REFERENCE COUNT:
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

ACCESSION NUMBER:
DOCUMENT NUMBER:
DOCUMENT NUMBER:
141:405654

NOSartams: A New Class of Pharmacodynamic Hybrids as Cardiovascular Drugs
Breschi, Maria C.; Calderone, Vincenzo; Digiacomo, Maria; Martelli, Alma; Martinotti, Enrica; Minutolo, Filippo; Rapposelli, Simona; Balsamo, Aldo Dipartimento di Psichiatria, Neurobiologia, Farmacologia e Biotecnologie, Universita di Pisa, Pisa, 56126, Italy

SOURCE:

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
DISARCHE SOURCE (S):
REFERENCE COUNT:
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PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
OTHER SOURCE(S):
REFERENCE COUNT:
THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

L12 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:432749 CAPLUS
DOCUMENT NUMBER: 143:178225
TITLE: Atmospheric Chemistry of C3-C6
Cycloalkanecarbaldehydes
O'Anna, Barbara; Wisthaler, Armin; Andreasen,
Ceyvind;

AUTHOR(S): Oeyvind;

CORPORATE SOURCE:

SOURCE:

Hansel, Armin; Hjorth, Jens; Jensen, Niels R.; Nielsen, Claus J.; Stenstrom, Yngve; Viidanoja, Jyrki Department of Chemistry, University of Oslo, Oslo, N-0315, Norway Journal of Physical Chemistry A (2005), 109 (23), 5104-5118 CODEN: JPCAFH; ISSN: 1089-5639 American Chemical Society Journal English 78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
REFERENCE COUNT:
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN CCESSION NUMBER: 2005:588522 CAPLUS DOCUMENT NUMBER: 143:120530 Nitric oxide-releasing pyruvate compounds, compositions and methods for treating cardiovascular and other diseases
Garvey, David S.; Fang, Xinqin; Subhash, Khanapure TITLE: INVENTOR (S): Ramani, Ranatunga R.; Shiow-Jyi, Wey Nitromed, Inc., USA Nitromed, Inc., USA PCT Int. Appl., 82 pp. CODEN: PIXXD2 PATENT ASSIGNEE(S): OCCMENT TYPE: FAMILY ACC. NOM: OF PATENT INFORMATION:

	CENT I				KINI		DATE			APPL						ATE	
	WO 2005060603						WO 2004-US41069				20041210						
WO	2005	0606	03		A3		2005	1201									
	W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	HR,	ΗU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,
		NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,
		TJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	zw
	RW:	BW,	GH,	GM,	KE,	LS,	MW,	MΖ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,
		AZ,	BY,	KG,	KZ,	MD,	RU,	TJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,
		EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	IS,	IT,	LT,	LU,	MC,	NL,	PL,	PT,
		RO,	SE,	SI,	SK,	TR,	BF,	ΒJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,
		MR,	NE,	SN,	TD,	TG											
AU	2004	3050	16		A1		2005	0707		AU 2	004-	3050	16		2	0041	210
CA	2549	412			A1		2005	0707		CA 2	004-	2549	412		2	0041	210
EP	1692	107			A2		2006	0823		EP 2	004-	8133	93		2	0041	210
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
		IE,	SI,	LT,	FI,	RO,	CY,	TR,	BG,	CZ,	EE,	HU,	PL,	SK,	IS		
PRIORITY	APP:	LN.	INFO	. :						US 2	003-	5281	84P	1	P 2	0031	210
										WO 2	004-1	JS41	069	1	W 2	0041	210

MARPAT 143:120530 OTHER SOURCE(S): R SOURCE(S): MARPAT 143:120530
The invention describes novel pyruvate compds. comprising at least one nitric oxide-releasing group and pharmaceutically acceptable salts thereof, and compns. and kits comprising at least one of these pyruvate compds., and, optionally, at least one nitric oxide donor and/or at least one therapeutic agent. The therapeutic agent is, e.g., an aldosterone antagonist, a-adrenoceptor antagonist, an ampiotensin II antagonist, an ACE inhibitor, an antidabetic, an antipyrelipidemic agent, an antioxidant, an antithrombotic, a vasodilator, a \$\begin{align\*} \text{--adrenoceptor} \text{ antipyrelipidemic agent, an invention also provides methods for treating cardiovascular diseases, renovascular diseases, diabetes, diseases resulting from oxidative \$\$\epsilon\$, renovascular diseases, diabetes, diseases resulting from oxidative \$\$\epsilon\$,

stress, endothelial dysfunctions, diseases caused by endothelial dysfunctions,

ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued) 857465-26-DP 857465-27-1P 857465-28-2P 857465-29-3P RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of nitric oxide-releasing pyruvate compds. and compns. for treating cardiovascular and other diseases) 857464-11-0 CAPLUS 1,2-Propanedione, 1-[4-(nitrooxy)-1-piperidinyl)- (CA INDEX NAME)

857464-12-1 CAPLUS Propanamide, N-[3-(nitrooxy)propyl]-2-oxo- (CA INDEX NAME)

857464-13-2 CAPLUS
Propanamide, N-[2,2-dimethyl-3-(nitrooxy)propyl]-2-oxo- (CA INDEX NAME)

857464-14-3 CAPLUS
Propanamide, N-[(1S)-2-(nitrooxy)-1-phenylethyl]-2-oxo- (CA INDEX NAME)

Absolute stereochemistry.

$$\circ_{2N} \circ \circ_{S} \overset{\mathbb{P}h}{\underset{H}{\bigvee}} \circ_{Me}$$

857464-15-4 CAPLUS Propanamide, N-[(18)-1-[(nitrooxy)methyl]-2-phenylethyl]-2-oxo- (CA

Absolute stereochemistry.

ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued) cirrhosis, pre-eclampsia, osteoporosis, nephropathy, reperfusing injury following ischemia, and/or preserving tissues, organs, organ parts and/or limbs using these compns. The nitric oxide releasing group is preferably a nitro group, a nitros group, and/or a heterocyclic nitric oxide donor group. The heterocyclic nitric oxide donor group is preferably a L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

limbs using these compns. The nitric oxide releasing group is preferably a nitro group, a nitros group, and/or a heterocyclic nitric oxide donor group. The heterocyclic nitric oxide donor group is preferably a furoxan, a sydnonimine, an oxatriazole-5-one and/or an oxatriazole-5-imine. Thus, a mixt. of nitrooxy-4-piperidinyl nitrate (1.045 g, 5 mmol) and pyruvic acid (440 mg, 5 mmol) in dichloromethane was treated with triethylamine (0.7 mL). To this soln. was added 1-ethyl-3-(3-dimethylaminopropyl)carbamide hydrochloride (EDAC) (960 mg, 5 mmol) followed by dimethylaminopyridine (DMAP, 610 mg, 5 mmol). The resulting soln. was then stirred under nitrogen atm. at room temp. overnight. The reaction mixt. was dild. with dichloromethane and washed with water, brine, dried over sodium sulfate, filtered, and the solvent was evapd. at reduced pressure. The product was purified by column chromatog. to give 1-[4-(nitrooxyl)piperidy]pipoyanel, 2-dione (470 mg, 44% yield) as a colorless thick oil.

IT 857464-11-0P 857464-12-IP 857464-13-2P 857464-13-PB 857464-13-PB 857464-12-PB 857464-22-PB 857464-23-PB 857464-23-PB 857464-23-PB 857464-23-PB 857464-23-PB 857464-23-PB 857464-23-PB 857464-33-PB 857464-33-PB 857464-32-PB 857464-32-PB 857464-32-PB 857464-32-PB 857464-33-PB 857464-33-PB 857464-33-PB 857464-33-PB 857464-33-PB 857464-33-PB 857464-33-PB 857464-33-PB 857464-33-PB 857464-35-PB 85 857465-04-4F 857465-05-5F 857465-06-6F 857465-07-7P 857465-08-8P 857465-09-9F 857465-10-2P 857465-11-3P 857465-12-4F 857465-13-5P 857465-14-6P 857465-15-7F 857465-16-8P 857465-21-5P 857465-22-6F 857465-23-7P 857465-24-8P 857465-25-9F

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-18-7 CAPLUS Propanoic acid, 2-oxo-, [3-[(nitrooxy)methyl]phenyl]methyl ester (CA INDEX NAME)

Propanoic acid, 2-oxo-, [4-(nitrooxy)-1-piperidinyl]methyl ester (CA INDEX NAME)

Propanoic acid, 2-oxo-, 2-[4-(nitrooxy)-1-piperidinyl]ethyl ester (CA INDEX NAME)

857464-21-2 CAPLUS Propanoic acid, 2-oxo-, 3-[4-(nitrooxy)-1-piperidinyl]propyl ester (CA INDEX NAME)

03/404-22-3 CAPLUS Propanoic acid, 2-0x0-, (2R)-2,3-bis(nitrooxy)propyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-23-4 CAPLUS Propanoic acid, 2-oxo-, [4-[2-(nitrooxy)ethyl]phenyl]methyl ester (CA INDEX NAME)

857464-24-5 VOIGNATARY CAPLUS
Propanoic acid, 2-oxo-, [4-[(nitrooxy)methyl]-1-piperazinyl]methyl ester (CA INDEX NAME) CAPLUS

 $857464-25-6 \quad \text{CAPLUS} \\ \text{Propanoic acid, } 2-\text{oxo-, } 2-[4-[(\text{nitrooxy})\text{methyl}]-1-\text{piperazinyl}] \\ \text{ethyl} \\ \\ \text{Propanoic acid, } 2-\text{oxo-, } 2-[4-[(\text{nitrooxy})\text{methyl}]-1-\text{piperazinyl}] \\ \text{ethyl} \\ \text{oxo-, } 3-[4-[(\text{nitrooxy})\text{methyl}]-1-\text{piperazinyl}] \\ \text{ethyl} \\ \text{oxo-, } 3-[4-[(\text{nitrooxy})\text{methyl}]-1-\text{piperazinyl$ (CA INDEX NAME)

ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued) 857464-30-3 CAPLUS
Propanoic acid, 2-oxo-, 3-[4-[2-(nitrooxy)ethyl]-1-piperazinyl]propyl ester (CA INDEX NAME)

$$(\operatorname{CH}_2)_3 - \circ - \operatorname{C} - \operatorname{Me}$$

857464-31-4 CAPLUS Propanoic acid, 2-oxo-, [4-[3-(nitrooxy)propy1]-1-piperazinyl]methyl (CA INDEX NAME)

857464-32-5 CAPLUS Propanoic acid, 2-oxo-, 2-[4-[3-(nitrooxy)propyl]-1-piperazinyl]ethyl ester (CA INDEX NAME) RN

$$\bigcap_{\mathsf{Me}=\mathsf{C}-\mathsf{C}-\mathsf{O}-\mathsf{CH}_2-\mathsf{CH}_2}^{\mathsf{C}(\mathsf{CH}_2)}\bigcap_{\mathsf{N}}^{\mathsf{C}(\mathsf{CH}_2)}(\mathsf{CH}_2)$$

857464-33-6 CAPLUS Propanoic acid, 2-oxo-, 3-[4-[3-(nitrooxy)propyl]-1-piperazinyl]propyl ester (CA INDEX NAME)

RN 857464-34-7 CAPLUS
CN 1,2-Propanedione, 1-[2-[(nitrooxy)methyl]-1-piperidinyl]- (CA INDEX NAME)

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-26-7 CAPLUS Propanoic acid, 2-oxo-, 3-[4-[(nitrooxy)methyl]-1-piperazinyl]propyl (CA INDEX NAME)

857464-27-8 CAPLUS
Propanoic acid, 2-oxo-, [4-[2-(nitrooxy)ethyl]-1-piperazinyl]methyl ester (CA INDEX NAME)

857464-29-0 CAPLUS
Propanoic acid, 2-0x0-, 2-[4-[2-(nitrooxy)ethyl]-1-piperazinyl]ethyl (CA INDEX NAME)

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-35-8 CAPLUS 1,2-Propanedione, 1-[3-[(nitrooxy)methyl]-1-piperidinyl]- (CA INDEX

RN 857464-36-9 CAPLUS
CN 1,2-Propanedione, 1-[4-[(nitrooxy)methyl]-1-piperidinyl]- (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\$$

857464-37-0 CAPLUS L-Cysteine, S-[3-[[2-[2-(nitrooxy)ethoxy]ethyl]amino]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-38-1 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[[2-[2-(nitrooxy)ethoxy]ethyl]amino]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

857464-39-2 CAPLUS L-Cysteine, S-[3-[2-[4-[2-(nitrooxy)ethoxy]phenoxy]ethoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-40-5 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[2-[4-[2-(nitrooxy)ethoxy]phenoxy]ethoxy]-2,3-dioxopropyl]-, 2-methyl ester (9C1) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-45-0 CAPLUS L-Cysteine, S-[3-[(3-(nitrooxy)propyl]amino]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

$$\bigcirc_{2^{N}} \bigcirc \bigcirc_{(CH_{2})_{3}} \stackrel{H}{\underset{O}{\bigvee}} \stackrel{N^{H_{2}}}{\underset{O}{\bigvee}} \stackrel{N^{H_{2}}}{\underset{O}{\bigvee}} \stackrel{OMe}{\underset{O}{\bigvee}}$$

857464-46-1 CAPLUS
Propanoic acid, 2-oxo-, 3-(nitrooxy)propyl ester (CA INDEX NAME)

857464-47-2 CAPLUS Propanoic acid, 2-oxo-, 2,2-dimethyl-3-(nitrooxy)propyl ester (CA INDEX NAME)

857464-48-3 CAPLUS
Propanoic acid, 2-oxo-, 3-(nitrooxy)-2-[(nitrooxy)methyl]propyl ester

RN 857464-49-4 CAPLUS

INDEX NAME)

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

 $857464-41-6 \quad CAPLUS \\ L-Cysteine, \quad S-[3-[[3-[(nitrooxy)methy1]pheny1]methoxy]-2, \\ 3-dioxopropy1]-, \\ methy1 \quad ester \quad (CA \quad INDEX \quad NAME)$ 

Absolute stereochemistry.

857464-42-7 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[[3-[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

857464-43-8 CAPLUS D-Cysteine, S-[3-[[4-[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-,methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-44-9 CAPLUS L-Cysteine, L-\gamma-glutamyl-S-[3-[[4-[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
CN Propanoic acid, 2-oxo-, 2-(nitrooxy)-1-[(nitrooxy)methyl]ethyl ester (CA
INDEX NAME)

857464-50-7 CAPLUS
Propanamide, N-[1,3-bis(nitrooxy)propyl]-2-oxo- (CA INDEX NAME)

857464-51-8 CAPLUS
Propanoic acid, 2-oxo-, [3,5-bis[(nitrooxy)methyl]phenyl]methyl ester

INDEX NAME)

857464-52-9 CAPLUS

Propanoic acid, 2-oxo-, 2-methyl-3-(nitrooxy)-2-[(nitrooxy)methyl]propyl ester (CA INDEX NAME)

857464-53-0 CAPLUS Propanoic acid, 2-oxo-, 3-(nitrooxy)-2,2-bis[(nitrooxy)methyl]propyl (CA INDEX NAME)

857464-54-1 CAPLUS Propanoic acid, 2-oxo-, 2-[4-[2-(nitrooxy)ethoxy]phenoxy]ethyl ester (CA INDEX NAME)

857464-55-2 CAPLUS
Propanoic acid, 2-oxo-, 2-nitro-3-(nitrooxy)-2-[(nitrooxy)methyl]propyl ester (CA INDEX NAME)

857464-56-3 CAPLUS
Propanamide, N-[2-[2-(nitrooxy)ethoxy]ethyl]-2-oxo- (CA INDEX NAME)

857464-57-4 CAPLUS Propanoic acid, 2-oxo-, [4-[(nitrooxy)methyl]phenyl]methyl ester (CA INDEX NAME)

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-61-0 CAPLUS L-Glutamic acid, 5-[2-[(1,2-dioxopropoxy)methyl]-2-methyl-3-(nitrooxy)propyl] ester (CA INDEX NAME)

857464-62-1 CAPLUS L-Glutamic acid, 5-[2-(1,2-dioxopropoxy)-1,1-bis[(nitrooxy)methyl]ethyl] ester (CA INDEX NAME)

Absolute stereochemistry.

857464-63-2 CAPLUS L-Glutamic acid, 5-[1-[(1,2-dioxopropoxy)methyl]-1-nitro-2-(nitrooxy)ethyl] ester (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-58-5 CAPLUS L-Glutamic acid, 5-[2-[(1,2-dioxopropyl)amino]-3-(nitrooxy)-2-[(nitrooxy)methyl]propyl] ester (CA INDEX NAME)

Absolute stereochemistry.

857464-59-6 CAPLUS L-Glutamine, N-[2-(1,2-dioxopropoxy)-1,1-bis[(nitrooxy)methyl]ethyl]-

Absolute stereochemistry.

857464-60-9 CAPLUS L-Glutamic acid, 5-[2-[(1,2-dioxopropoxy)methyl]-3-(nitrooxy)propyl] (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-64-3 CAPLUS L-Glutamic acid, 5-[1-[(1,2-dioxopropyl)amino]-2-(nitrooxy)ethyl] ester (CA INDEX NAME)

Absolute stereochemistry.

857464-65-4 CAPLUS

85/464-65-4 CAPLUS L-Glutamic acid, 5-[[3-[(1,2-dioxopropoxy)methyl]-5-[(nitrooxy)methyl]phenyl]methyl] ester (CA INDEX NAME)

Absolute stereochemistry.

857464-66-5 CAPLUS L-Glutamic acid, 5-[2-(1,2-dioxopropoxy)-3-(nitrooxy)propyl] ester (CA INDEX NAME)

857464-67-6 CAPLUS L-Glutamic acid, 5-[1-[(1,2-dioxopropoxy)methyl]-2-(nitrooxy)ethyl] (CA INDEX NAME)

Absolute stereochemistry.

857464-68-7 CAPLUS L-Glutamine, N-[1-[(1,2-dioxopropoxy)methyl]-2-(nitrooxy)ethyl]- (CA INDEX NAME)

Absolute stereochemistry.

857464-69-8 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[[3-(nitrooxy)propyl]amino]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-73-4 CAPLUS L-Cysteine, L-Y-glutamyl-S-[3-[[2-(nitrooxy)-1-[(nitrooxy)methyl]ethyl]amino]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857464-74-5 CAPLUS L-Cysteine, S-[3-[3-(nitrooxy)-2,2-bis[(nitrooxy)methyl]propoxy]-2,3-dioxoptopyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

 $857464-75-6 \quad CAPLUS \\ L-Cysteine, \quad L-Y-glutamyl-S-[3-[3-(nitrooxy)-2,2-bis[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, \quad 2-methyl ester \quad (9C1)$ 

INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

$$O_{2N} \xrightarrow{O} (CH_{2})_{3} \xrightarrow{H} \xrightarrow{N} S \xrightarrow{N} H \xrightarrow{S} CO_{2}H$$

857464-70-1 CAPLUS

RN 85/464-/U-1 CAPLUS
CN L-Cysteine,
S-[3-[[2,2-dimethyl-3-(nitrooxy)propyl]amino]-2,3-dioxopropyl], methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-71-2 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[[2,2-dimethyl-3-(nitrooxy)propyl]amino]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857464-72-3 CAPLUS

OCHAGA CATBOS CATBOS (ACTOM CATBOS) 1-[(nitrooxy)-1-[(nitrooxy)methyl]ethyl]amino]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-76-7 CAPLUS L-Cysteine, S-[3-[2-methyl-3-(nitrooxy)-2-[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

857464-77-8 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[2-methyl-3-(nitrooxy)-2-[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857464-78-9 CAPLUS L-Cysteine, S-[3-|2-nitro-3-(nitrooxy)-2-[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
RN 857464-79-0 CAPLUS
COPYRIGHT 2008 ACS on STN (Continued)
RN 857464-79-0 CAPLUS
[(nitrooxy)-e-glutamyl-5-[3-[2-nitro-3-(nitrooxy)-2-[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA

Absolute stereochemistry.

857464-80-3 CAPLUS L-Cysteine, S-[3-[3-(nitrooxy)propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

857464-81-4 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[3-(nitrooxy)propoxy]-2,3-dioxopropyl]-, 2-methyl ester (9C1) (CA INDEX NAME)

Absolute stereochemistry.

857464-82-5 CAPLUS L-Cysteine, S-[3-[2,2-dimethyl-3-(nitrooxy)propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-86-9 CAPLUS L-Cysteine, S-[3-[2-(nitrooxy)-1-[(nitrooxy)methyl]ethoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-87-0 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[2-(nitrooxy)-1-[(nitrooxy)] methyl]ethoxy]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857464-88-1 CAPLUS L-Cysteine, S-[3-[[3,5-bis[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

$$\circ_2 \mathbb{N}$$

 $857464-89-2 \quad CAPLUS \\ L-Cysteine, \quad L-\gamma-glutamyl-S-[3-[[3,5-bis[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-, \quad 2-methyl ester (9CI) \quad (CA INDEX NAME)$ 

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-83-6 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[2,2-dimethyl-3-(nitrooxy)propoxy]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857464-84-7 CAPLUS L-Cysteine, S-[3-3-3-(nitrooxy)-2-[(nitrooxy)methyl]propoxy]-2,3-dioxopropy]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-85-8 CAPLUS L-Cysteine, L-y-glutamyl-S-[3-[3-(nitrooxy)-2-[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-90-5 CAPLUS L-Cysteine, N-acetyl-S-[3-[[2-[2-(nitrooxy)ethoxy]ethyl]amino]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-91-6 CAPLUS L-Cysteine, N-acetyl-S-[3-[3-(nitrooxy)propyl]amino]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

$$\circ_{2^{\mathbb{N}}} \circ \circ_{(\mathsf{CH}_{2})_{3}} \overset{\mathsf{H}}{\underset{\circ}{\mathbb{N}}} \overset{\mathsf{O}}{\underset{\circ}{\mathbb{N}}} \mathsf{S} \overset{\mathsf{NHAc}}{\underset{\circ}{\mathbb{N}}} \circ \mathsf{CMe}$$

857464-92-7 CAPLUS L-Cysteine, N-acetyl-S-[3-[2-[4-[2-(nitrooxy)ethoxy]phenoxy]ethoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

 $857464-93-8 \quad {\tt CAPLUS} \\ {\tt L-Cysteine, N-acetyl-S-[3-[[2,2-dimethyl-3-(nitrooxy)propyl]amino]-2,3-1} \\ {\tt CAPLUS} \\ {$ 

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN dioxopropyl]-, methyl ester (CA INDEX NAME) (Continued)

Absolute stereochemistry.

857464-94-9 CAPLUS L-Cysteine, N-acetyl-S-[3-[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

$$\circ_2 \mathsf{N} \qquad \circ \qquad \circ \qquad \mathsf{N} \\ \mathsf{$$

857464-95-0 CAPLUS

CN L-Cysteine,
N-acetyl-S-[3-[[2-(nitrooxy)-1-[(nitrooxy)methyl]ethyl]amino]2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-96-1 CAPLUS L-Cysteine, N-acetyl-S-[3-[[4-[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857465-00-0 CAPLUS L-Cysteine, N-acetyl-S-[3-[2-(nitrooxy)-1-[(nitrooxy)methyl]ethoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

857465-01-1 CAPLUS L-Cysteine, N-acetyl-S-[3-[3-(nitrooxy)propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857465-02-2 CAPLUS L-Cysteine, N-acetyl-S-[3-[[3,5-bis[(nitrooxy)methyl]phenyl]methoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857464-97-2 CAPLUS

RN 03/101=3/12 CLLDSC
CN L-Cysteine,
N-acetyl-S-[3-[3-(nitrooxy)-2,2-bis[(nitrooxy)methyl]propoxy]2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857464-98-3 CAPLUS L-Cysteine, N-acety1-S-[3-[2-methy1-3-(nitrooxy)-2-[(nitrooxy)methy1]propoxy]-2,3-dioxopropy1]-, methy1 ester (CA INDEX NAME)

Absolute stereochemistry.

857464-99-4 CAPLUS
L-Cysteine, N-acetyl-S-[3-[2-nitro-3-(nitrooxy)-2[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857465-03-3 CAPLUS L-Cysteine, N-acetyl-S-[3-[2,2-dimethyl-3-(nitrooxy)propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

857465-04-4 CAPLUS L-Glutamic acid, 5-[(2S)-3-[(2R)-2,3-bis(nitrooxy)propoxy]-2-[(1,2-dioxopropyl)amino]-3-oxopropyl] ester (CA INDEX NAME)

Absolute stereochemistry.

857465-05-5 CAPLUS L-Glutamic acid, 5-[(2S)-3-[(2S)-2,3-bis(nitrooxy)propoxy]-2-[(1,2-dioxopropyl)amino]-3-oxopropyl] ester (CA INDEX NAME)

857465-06-6 CAPLUS L-Ornithine, N2-(1,2-dioxopropyl)-N5-L-γ-glutamyl-, 2-[(2R)-2,3-bis(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857465-07-7 CAPLUS L-Ornithine, N2-(1,2-dioxopropyl)-N5-L-γ-glutamyl-, 2-[(2S)-2,3-bis(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857465-08-8 CAPLUS L-Lysine, N2-(1,2-dioxopropyl)-N6-L-γ-glutamyl-, 2-[(2R)-2,3-bis(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857465-12-4 CAPLUS L-Lysinamide, N-[(2R)-2,3-bis(nitrooxy)propyl]-N2-(1,2-dioxopropyl)-N6-L-y-glutamyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

 $857465-13-5 \quad CAPLUS \\ L-Lysinamide, \quad N-[(2S)-2,3-bis(nitrooxy)propyl]-N2-(1,2-dioxopropyl)-N6-L-\gamma-glutamyl- (9CI) \quad (CA INDEX NAME)$ 

Absolute stereochemistry.

857465-14-6 CAPLUS
L-Lysine, N2-(1,2-dioxopropyl)-N6-L-Y-glutamyl-,
2-[3-(nitrooxy)-2,2-bis[(nitrooxy)methyl]propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857465-09-9 CAPLUS L-Lysine, N2-(1,2-dioxopropyl)-N6-L-γ-glutamyl-, 2-[(2S)-2,3-bis(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857465-10-2 CAPLUS L-Norvaline, 5-[[(2R)-3-[(2R)-2,3-bis(nitrooxy)propoxy]-2-[(1,2-dioxpropy)]amino]-3-oxopropyl]thio]-5-oxo- (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

857465-11-3 CAPLUS
L-Norvaline, 5-[[(2S)-3-[(2R)-2,3-bis(nitrooxy)propoxy]-2-[(1,2-dioxopropyl)amino]-3-oxopropyl]thio]-5-oxo- (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

857465-15-7 CAPLUS L-Lysine, N2-(1,2-dioxopropyl)-N6-L-y-glutamyl-, 2-ester with 3,6-anhydro-2-deoxy- $\beta$ -L-glycero-hexofuranose 5-nitrate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857465-16-8 CAPLUS L-Lysine, N2-(1,2-dioxopropyl)-N6-L- $\gamma$ -glutamyl-, 2-ester with 3,6-anhydro-2-deoxy- $\beta$ -D-glycero-hexofuranose 5-nitrate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

 $857465-21-5 \quad CAPLUS \\ L-Lysine, \ L-y-glutamyl-N6-(1,2-dioxopropyl)-, \ 2-[(2R)-2,3-bis(nitrooxy)propyl] \ ester \ (9CI) \quad (CA \ INDEX \ NAME)$ 

Searched by Jason M. Nolan, Ph.D.

(Continued)

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

 $\begin{array}{lll} 857465-22-6 & \texttt{CAPLUS} \\ \texttt{L-Lysine}, & \texttt{L-\gamma-glutamyl-N6-(1,2-dioxopropyl)-,} & \texttt{2-[bis(nitrooxy)propyl]} & \texttt{ester} & (\texttt{9CI}) & (\texttt{CA INDEX NAME}) \end{array}$ 2-[(25)-2,3-

Absolute stereochemistry.

CAPLUS

CHIDOS CHIDOS (12) CHIDOS (13) CHIDOS (13) CHIDOS (14) CHIDOS (14)

Absolute stereochemistry.

857465-24-8 CAPLUS

L-Lysinamide, L- $\gamma$ -glutamyl-N-[(2S)-2,3-bis(nitrooxy)propyl]-N6-(1,2-dioxopropyl)- (9CI) (CA INDEX NAME)

L12 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

Absolute stereochemistry.

857465-25-9 CAPLUS L-Serine, L-Y-glutamyl-, 2-[(2R)-2,3-bis(nitrooxy)propyl] ester, 2-oxopropanoate (ester) (9CI) (CA INDEX NAME)

857465-26-0 CAPLUS

L-Serine,  $L-\gamma$ -glutamyl-, 2-[(2S)-2,3-bis(nitrooxy)propyl] ester, 2-oxopropanoate (ester) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continu 857465-27-1 CAPLUS L-Ornithine, L-y-glutamyl-N5-(1,2-dioxopropyl)-, 2-[(2R)-2,3-bis(nitrooxy)propyl] ester (9CI) (CA INDEX NAME) (Continued)

Absolute stereochemistry.

857465-28-2 CAPLUS L-Ornithine, L-y-glutamyl-N5-(1,2-dioxopropyl)-, 2-[(28)-2,3-bis(nitrooxy)propyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

857465-29-3 CAPLUS

L-Cysteine, N-acetyl-S-[3-[3-(nitrooxy)-2-[(nitrooxy)methyl]propoxy]-2,3-dioxopropyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN ACCESSION NUMBER: 2001:585947 CAPLUS

DOCUMENT NUMBER:

2001:585947 CAPLUS
135:361671
New methodology for ozone depletion potentials of
short-lived compounds: N-propyl bromide as an example
Wuebbles, Donald J.; Patten, Kenneth O.; Johnson,
Matthew T.; Kotamarthi, Rao
Department of Atmospheric Sciences, University of
Illinois, Urbana, IL, USA
Journal of Geophysical Research, [Atmospheres]

AUTHOR(S):

CORPORATE SOURCE:

SOURCE:

106(D13), 14551-14571 CODEN: JGRDE3; ISSN: 0148-0227 American Geophysical Union

CODEN: JGRDE3; ISSN: 0148-0227

PUBLISHER: American Geophysical Union

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A number of the compds. proposed as replacements for substances controlled

under the Montreal Protocol have extremely short atmospheric lifetimes,

on the order of days to a few months. An important example is Pr bromide (also referred to as 1-bromopropane, CHZBrCHZCH3 or simplified as 1-C3H7Br or nPB). This compound, useful as a solvent, has an atmospheric lifetime of <20 days

due to its reaction with hydroxyl radicals. Because nPB contains

bromine, any amount reaching the stratosphere has the potential to affect concns.

stratospheric ozone. The definition of ozone depletion potentials (ODPs) needs to be modified for such short-lived compds. to account for the location and timing of emissions. It is not adequate to treat these chems. as if they were uniformly emitted at all latitudes and longitudes as is normally done for longer-lived gases. Thus, for short-lived compds., policymakers will need a table of ODP values instead of the single value generally provided in past studies. This study uses the MOZART2 3-dimensional chemical transport model in combination with ies

studies

with our less computationally expensive 2-dimensional model to examine

potential effects of nPB on stratospheric ozone. Multiple facets of this study examine key questions regarding the amount of bromine reaching the stratosphere following emission of nPB. Our most significant findings from this study for the purposes of short-lived replacement compound

effects are summarized as follows. The degradation of nPB produces a significant quantity of bromoacetone, which increases the amount of

bromine
transported to the stratosphere due to nPB. However, much of that effect
is not due to bromoacetone itself, but instead to inorg. bromine which is
produced from tropospheric oxidation of nPB, bromoacetone, and other
degradation
products and is transported above the dry and wet deposition processes of
the model. The MOZART2 nPB results indicate a minimal correction of the
2-dimensional results in order to derive our final results: an nPB
chemical

chemical

lifetime of 19 days and an ODP range of 0.033 to 0.040 for assumed global
emissions over landmasses, 19 days and 0.021 to 0.028, resp., for assumed
emissions in the industrialized regions of the Northern Hemisphere, and 9
days and 0.087 to 0.105, resp., for assumed emission in tropical

Southeast

ANSWER 2 G - ...
Asia.
340171-63-3 372952-10-8
RL: GPR (Geological or astronomical process); POL (Pollutant); RCT
(Reactant); OCCU (Occurrence); PROC (Process); RACT (Reactant or reagent)
(formation from PrBr and calcn.of atmospheric half-life and rainout

:ime;
new methodol. for calcn. of ozone depletion potentials of short-lived
compds. such as Pr bromide)
340171-63-3 CAPLUS
2-Propanone, 3-bromo-1-(nitrodioxy)-1-oxo- (CA INDEX NAME)

372952-10-8 CAPLUS
Propanoyl bromide, 3-(nitrodioxy)-2,3-dioxo- (CA INDEX NAME)

THERE ARE 32 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L12 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:531499 CAPLUS
DOCUMENT NUMBER: 117:131499
L17:131499
L17:12851a,28854a
Preparation of hexitol derivatives as cardiovascular agents.
Suzuki, Fumio; Hayashi, Hiroaki; Kubo, Kazuhiro; Tkeda, Junichi
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo K. K., Japan
SOURCE: EVIL Pat. Appl., 22 pp.
CODEN: EPXIDW
DOCUMENT TYPE: Patent
LANGUAGE: ENGINE CONT: 1

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 485723	A1	19920520	EP 1991-116548	19910927
EP 485723	B1	19940914		
R: DE, FR, GB,	IT			
US 5120737	A	19920609	US 1991-764827	19910924
CA 2052082	A1	19920329	CA 1991-2052082	19910926
CA 2052082	C	19970527		
JP 04364184	A	19921216	JP 1991-247958	19910926
JP 3058955	B2	20000704		
PRIORITY APPLN. INFO.:			JP 1990-259385 A	19900928

MARPAT 117:131499 OTHER SOURCE(S):

Title compds. I [R = H, (un)substituted alkylcycloalkyl, alkenyl, alkoxy, alkanoyl, piperidyn, X(CH2)mCT2(CH2)n wherein m, n = 0-3, X, Y Z, = H, alkyl, alkoxy, alkanoyl, alkanoyloxy, HO, halo, O2N] or a salt thereof, useful as vasodilators, are prepared 5-Deoxy-5-(piperazin-1-yl)-1,413,6-dianhydro-L-iditol-2-nitrate (preparation given) in CH2C12 was stirred at 0° and reacted with Ac2O and pyridine to give after workup L-I (R = Me) which was converted to the HCl salt (II). In a test for coronary vasospasm model in rats, II showed a min. effectiveness of <30 mg/kg,

L12 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN ACCESSION NUMBER: 2001:287681 CAPLUS DOCUMENT NUMBER: 134:370967

Effects of n-propyl bromide and other short lived TITLE:

DOCUMENT TYPE:

LANGUAGE:

AUTHOR SDUMENT TYPE:

LANGUAGE:

ADDUCTION OF This study uses the MOZART three-dimensional model in combination with studyes with a less computationally expensive two-dimensional model to examine potential effects of Programs (APP).

bromine reaching the stratosphere following emission of nPB.
340171-63-3
RI: FMU (FOrmation, unclassified); PEP (Physical, engineering or chemical process); POL (Pollutant); FORM (Formation, nonpreparative); OCCU (Occurrence); PROC (Process)

(effects of Pr bromide and other short lived chems. on stratospheric

ozone) 340171-63-3 CAPLUS 2-Propanone, 3-bromo-1-(nitrodioxy)-1-oxo- (CA INDEX NAME)

REFERENCE COUNT: THERE ARE 23 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN (Continued) , 5-nitrate, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

● HCl

143277-70-7 CAPLUS

CN L-Iditol, 1,4:3,6-dianhydro-2-deoxy-2-[4-(1,2-dioxopropyl)-1-piperazinyl]-,5-nitrate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L12 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1976:121161 CAPLUS
DOCUMENT NUMBER: 84:121161
ORIGINAL REFERENCE NO: 84:19665a, 19668a
TITLE: 1,4-Disubstituted 2,3-butanediones
INVENTOR(S): Nikolaeva, A. D.; Kirsanov, A. P.
PATENT ASSIGNEE(S): Kazan Chemical-Technological Institute, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy,
Tovarnye Znaki 1976, 53(8), 52.
CODEN: URXXAF
LANGUAGE: Russian DOCUMENT TYPE: COLUMN TYPE: LANGUAGE: ROTALLY ACC. NUM. COUNT: 1 PATENT INFORMATION: Russian

PATENT NO.

SU 504749
PRIORITY APPLN. INFO.: KIND DATE APPLICATION NO. DATE A1 19760228 SU 1974-2017453 19740419 SU 1974-2017453 A 19740419

RCH2CCCCCH2R (R = halo, alkoxy, ONO2) were prepared by N2O4 oxidation of RCH2C=CCH2R in a refluxing halogenated hydrocarbon. 50246-23-4P RI: SPN (Synthetic preparation); PREP (Preparation) (preparation of) 58246-23-4 CAPLUS 2,3-Butanedione, 1,4-bis(nitrooxy)- (CA INDEX NAME)

L12 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1976:73584 CAPLUS
DOCUMENT NUMBER: 84:73584 CAPLUS
ORIGINAL REFERENCE NO.: 84:12063a,12066a
SITILE: Synthesis of nitrates of some acetylene and diacetylene alcohols
AUTHOR(S): Nikolaeva, A. D.; Kirsanov, A. P.; Kadyrova, R. G.
CORPORATE SOURCE: Kazan. Khim.-Tekhnol. Inst. im. Kirova, Kazan, USSR
SOURCE: Lavestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya Tekhnologiya (1975), 18(11), 1715-16
CODEN: IVUKAR; ISSN: 0579-2991
DOCUMENT TYPE: Journal
LANGUAGE: Russian

DOCUMENT TYPE: JOURNAL
LANGUAGE: Russian
AB Treating RC.tplbond.CCH20X [I; R = H, Me, XOCH2, XOCH2C.tplbond.C; X = H)
and Rlc.tplbond.CCHMeOX (II; RI = H, XOCHMeC.tplbond.C; X = H) with HNO3
in CH2Cl2 or Ac2O, or with N2O4 in CCl4 afforded the resp. I (X = NO2)

II (X = NO2) in ≤71.5% yield.
58246-23-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and borohydride reduction of)
58246-23-4 CAPLUS
2,3-Butanedione, 1,4-bis(nitrooxy)- (CA INDEX NAME)